

Amendment dated September 23, 2009
Reply to Office Action of May 14, 2009

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An exhaust system in a radiation gas range, the exhaust system comprising:
 - a housing having exhaust openings in a rear part that discharge of exhaust gas;
 - a cover on top of the housing that transmits radiant heat to an object placed thereon;
 - front and rear burner housings in contact with a bottom surface of the cover that form spaces to burn mixed gas therein;
 - front radiation gas burners in the front burner housings, respectively, each burning mixed gas at a surface of a radiation body to generate a radiation energy;
 - rear radiation gas burners in the front burner housings, respectively, each burning mixed gas at a surface of a radiation body to generate a radiation energy; and
 - an exhaust duct in communication with the front and/or rear burner housings that discharges exhaust gas from the front and rear radiation burners toward the exhaust openings, wherein the exhaust duct includes:

- a first exhaust duct in communication with the front burner housings; and
 - a second exhaust duct formed inside of, and separate from, the first exhaust duct in communication with the rear burner housings, wherein two sets of each of the front and rear

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burner housings, and the front and rear radiation gas burners are provided, and wherein the exhaust duct is arranged at a central part of the housing to pass between the front radiation gas burners and between the rear radiation gas burners, and further comprising a partition wall at a central part of each of the first and second exhaust ducts, that divides each of the first and second ducts exhaust into two parts.

2-5. (Canceled).

6. (Previously Presented) The exhaust system as claimed in claim 1, wherein the second exhaust duct has a sectional area smaller than 1/2 of a sectional area of the first exhaust duct.

7. (Canceled).

8. (Currently Amended) An exhaust system in a radiation gas range, the exhaust system comprising:

a housing having exhaust openings in a rear part that discharge exhaust gas;

a sheet of glass on top of the housing that transmits radiant heat to an object placed thereon;

two front burner housings and two rear burner housings in contact with a bottom surface

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of the sheet of glass that form spaces to burn mixed gas therein;

two front radiation gas burners and two rear radiation gas burners in lower parts of the front and rear burner housings, respectively, each burning mixed gas at a surface of a radiation body to generate a radiation energy;

a first exhaust duct in lower parts of, and that passes through spaces between the front burner housings and between the rear burner housings in communication with the front burner housings, that discharges exhaust gas from the front radiation burners toward the exhaust openings; and

a second exhaust duct formed inside of, and separate from, the first exhaust duct in communication with the rear burner housings;

a first partition wall at a central part of the first exhaust duct, that divides the first exhaust duct into two parts, one of which communicates with the front burner housing on a left side, and the other one of which communicates with the front burner housing on a right side; and

a second partition wall at a central part of the second exhaust duct, that divides the second exhaust duct into two parts, one of which communicates with the rear burner housing on a left side, and the other one of which communicates with the rear burner housing on a right side.

9-10. (Canceled).

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11. (Original) The exhaust system as claimed in claim 8, wherein the second exhaust duct has a sectional area smaller than 1/2 of a sectional area of the first exhaust duct.

12. (Previously Presented) An exhaust system in a radiation gas range, the exhaust system comprising:

a housing having exhaust openings in a rear part that discharge exhaust gas;

a cover on top of the housing that transmits radiant heat to an object placed thereon;

two front and rear burner housings in contact with a bottom surface of the sheet of glass cover that form spaces to burn mixed gas therein;

two front radiation gas burners and two rear radiation gas burners in the front and rear burner housings, respectively, each burning mixed gas at a surface of a radiation body to generate a radiation energy;

a central exhaust duct in communication with the front burner housing, that guides exhaust gas from the front radiation gas burners to the exhaust openings, wherein the central exhaust duct is formed by the front burner housing; and

two rear exhaust ducts in communication with the rear burner housings, respectively, that discharge exhaust gas from the front radiation gas burners and the rear radiation gas burners toward the exhaust openings.

13. (Previously Presented) An exhaust system in a radiation gas range, the exhaust

system comprising:

a housing having exhaust openings in a rear part that discharge exhaust gas;

a cover on top of the housing that transmits radiant heat to an object placed thereon;

a front and rear burner housing in contact with a bottom surface of the cover that form spaces to burn mixed gas therein;

front radiation gas burners in the front and rear burner housing, each burning mixed gas at a surface of a radiation body to generate a radiation energy;

rear radiation gas burners in the front and rear burner housing, each burning mixed gas at a surface of a radiation body to generate a radiation energy; and

an exhaust duct that discharges exhaust gas from the front and rear radiation burners toward the exhaust openings, wherein the exhaust duct is formed by the front and rear burner housing.

14. (Previously Presented) The exhaust system as claimed in claim 13, wherein the exhaust duct is arranged at a central part of the housing to pass between the front radiation gas burners and between the rear radiation gas burners.

15. (Previously Presented) The exhaust system as claimed in claim 14, further comprising a partition wall at a central part of the exhaust duct, that divides the exhaust duct into two parts, one of which communicates with the front burner and the rear burner on a left

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side, and the other one of which communicates with the front burner and the rear burner on a right side.

16. (Currently Amended) The exhaust system as claimed in claim 12, wherein the exhaust duct comprises two separate exhaust ducts including a left exhaust duct in communication with the front burner and the rear burner on a left side and a right exhaust duct in communication with the front burner and the rear burner on a right side.

17–19. (Canceled).

20. (Previously Presented) A radiation gas range comprising the exhaust system of claim 1.

21. (Previously Presented) A radiation gas range comprising the exhaust system of claim 8.

22. (Previously Presented) A radiation gas range comprising the exhaust system of claim 12.

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23. (Previously Presented) The exhaust system of claim 12, wherein the cover comprises a sheet of glass.

24. (Previously Presented) The exhaust system of claim 12, wherein the two front radiation burners and two rear radiation burners are provided in lower parts of the front and rear burner housings, respectively.

25. (Previously Presented) The exhaust system of claim 12, wherein a partition wall at a central part of the central exhaust duct divides the central exhaust duct into two parts, one of which communicates with the front burner housing on a left side, and the other one of which communicates with the front burner housing on a right side.

26. (Previously Presented) The exhaust system of claim 12, wherein the two rear exhaust ducts communicate with rear parts of the rear burner housing, respectively.

27. (Previously Presented) A radiation gas range comprising the exhaust system of claim 13.

28. (Previously Presented) The exhaust system of claim 12, wherein the cover comprises a sheet of glass.

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29. (Previously Presented) The exhaust system of claim 13, wherein the two front radiation burners and two rear radiation burners are provided in lower parts of the front and rear burner housings, respectively.